What is claimed:

1. An endoluminal device comprising at least one superelastic section and at least one plastically deformable section.

2. The device of claim 1, wherein the plastically deformable section has a greater x-ray visibility than the superelastic section.

3. The device of claim 1 having a length wherein each of the superelastic section and the plastically deformable section extend longitudinally along the length of the device.

4. The device of claim 1 further comprising a plurality of filaments including one or more superelastic filaments and one or more plastically deformable filaments.

5. The device of claim 4 having a length, wherein said one or more superelastic filaments extend longitudinally substantially parallel to said one or more plastically deformable filaments along the length of the stent.

6. The device of claim 5 having a first end and a second end, wherein each of said superelastic filaments and said plastically deformable filaments extends only once from the first end to the second end of the stent.

7. The device of claim 4 having a first end and a second end, wherein at least one of said superelastic filaments or deformable filaments longitudinally traverses the length of the stent from the first end to the second end in a plurality of columnar units.

8. The device of claim 4 consisting of a single superelastic filament and a single plastically deformable filament.

9. The device of claim 4, wherein each of said superelastic filaments is connected along one or more longitudinal portions thereof to another superelastic filament, another columnar unit of the same superelastic filament, one or more of said plastically deformable filaments, or a combination thereof, and each of said plastically deformable filaments is connected along one or more longitudinal portions thereof to another plastically

deformable filament, another columnar unit of the same plastically deformable filament, one or more of said superelastic filaments, or a combination thereof.

10. The device of claim 9, wherein the longitudinal portions are connected at a joint by one of: a brazed connection, a weld, an adhesive bond, or a suture.

11. The device of claim 9 further comprising one or more joints comprising: a first longitudinal portion of one of the superelastic filaments, a second longitudinal portion of one of the plastically deformable filaments abutting said first portion, and a joining coil wrapped about said first and second portions.

12. The device of claim 11, wherein said superelastic filaments comprise a superelastic grade of nitinol; said plastically deformable filaments comprise a material selected from the group consisting of: gold, platinum, tantalum, titanium, stainless steel, tungsten, a nickel alloy, a cobalt alloy, a titanium alloy, and a combination thereof; and said brazed coil comprises a thermal shape memory grade of nitinol.

13. The device of claim 1, wherein each said superelastic section comprises a precision-cut sheet or a longitudinally severed precision-cut tube.

14. The device of claim 13, wherein each said plastically deformable section comprises at least one columnar unit having a zig-zag configuration disposed between two superelastic sections or between opposite longitudinal edges of a single superelastic section.

15. The device of claim 14 consisting of a single plastically deformable section comprises a single columnar unit attached between opposite longitudinal edges of a single superelastic section.

16. The device of claim 1, wherein each plastically deformable section comprises a combination of superelastic material and plastically deformable material wherein said plastically deformable material constrains the superelastic material.

17. The device of claim 16, wherein said combination is selected from a group consisting of: plastically deformable material plated onto said superelastic material, a plastically deformable hypotube overlaid onto said superelastic material, ion implantation of

said plastically deformable material into said superelastic material, and a composite comprising said deformable material and said superelastic material.

18. The device of claim 16, wherein the combination comprises a composite comprising plastically deformable material sandwiched between inner and outer layers of superelastic material.

19. The device of claim 16, wherein the plastically deformable material is gold.

20. The device of claim 16 further comprising one or more hoops in a zig-zag configuration of oppositely-pointing apex sections, each plastically deformable section comprising one or more apex sections comprising said plastically deformable material.

21. The device of claim 19 further comprising a plurality of hoops wherein the apex sections pointed in a first direction on each of said hoops are longitudinally aligned and the plastically deformable apex sections on each of said hoops are longitudinally aligned.

22. The device of claim 1 having a first constrained diameter, a second fully-self-expanded diameter, and a third fully-forcibly-expanded diameter, wherein said third diameter is greater than said second diameter and said second diameter is greater than said first diameter.

23. The device of claim 1, wherein each of said superelastic sections comprises nitinol and each of said plastically deformable sections comprises a plastically deformable material selected from the group consisting of: gold, platinum, tantalum, titanium, stainless steel, tungsten, palladium, a nickel alloy, a titanium alloy, a cobalt alloy, and a combination thereof.

24. The device of claim 1, wherein the device is selected from the group consisting of: a stent and a vena cava filter.

25. The device of claim 1, wherein said at least one superelastic section comprises a first tubular section and said at least one plastically deformable section comprises a second tubular section.

26. The device of claim 25, wherein the first tubular section consists essentially of a superelastic material alone and the second tubular section consists essentially of plastically deformable material alone.

27. The device of claim 25, wherein the second tubular section comprises a combination of superelastic material and plastically deformable material having a first ratio of plastically deformable material to superelastic material.

28. The device of claim 27, wherein the device comprises two opposite end sections having a middle section therebetween, the middle section comprising the first tubular section, and the two opposite ends each comprising second tubular sections.

29. The device of claim 28, wherein each end section comprises the plastically deformable material aligned in longitudinal stripes between stripes of superelastic material.

30. The device of claim 27, wherein the first tubular section comprises a combination of superelastic material and plastically deformable material having a second ratio of plastically deformable material to superelastic material less than said first ratio.

31. The device of claim 25 further comprising a third tubular section comprising a superelastic section, the second tubular section disposed longitudinally between the first tubular section and the third tubular section, the first tubular section having a first fully-self-expanded diameter and the second tubular section having a second fully-self-expanded diameter.

32. The device of claim 31, wherein the first fully-self-expanded diameter is less than the second fully-self-expanded diameter, and the second tubular section has a fully-forcibly-expanded diameter at least as great as said second fully-self-expanded diameter.

33. A method of manufacturing an endoluminal device having an architecture, said method comprising:

(a) forming a composite comprising a first layer comprising a first material, a second layer comprising the first material, and an intermediate layer between the first and second layers comprising a second material in a non-continuous distribution; and

(b) cutting or etching away portions of the composite tube in a pattern to form the device architecture.

34. The method of claim 33, wherein step (a) comprises forming the composite as a sheet and rolling the sheet to a desired thickness.

35. The method of claim 34 further comprising forming the sheet into a tube prior to step (b).

36. The method of claim 34 further comprising forming the device architecture into a tubular shape after step (b).

37. The method of claim 33, wherein step (a) comprises forming the composite as tube wherein the first layer is an inner annular layer and the second layer is an outer annular layer and the intermediate layer is an annular layer between the inner and outer layers.

38. The method of claim 33 wherein the non-continuous distribution comprises a continuous longitudinal stripe, a non-continuous longitudinal stripe, a continuous transverse stripe, or a non-continuous transverse rings.

39. A method of deploying an endoluminal device in a body lumen, the device comprising at least one superelastic section and at least one plastically deformable section, the method comprising:

(a) introducing the device into the body lumen with the device radially constrained in a first configuration having a first diameter;

(b) allowing the device to self-expand into a second configuration having a second diameter greater than the first diameter and less than or equal to a fully-self-expanded diameter; and optionally,

(c) forcibly expanding the device into a third configuration in which at least one longitudinal portion of said device has a third diameter greater than said second diameter and equal to or less than a fully-forcibly-expanded diameter.

40. The method of claim 39 wherein step (c) comprises using a balloon to forcibly expand said device into said third configuration.

41. The method of claim 40 wherein step (c) further comprises using said balloon to forcibly expand at least portions of said device into a fourth, intermediate configuration having a fourth, overexpanded diameter greater than said fully-forcibly-expanded diameter, and then allowing said device to relax to said third configuration.

42. The method of claim 39 wherein the device comprises a first, tubular section comprising one of the superelastic sections and a second tubular section comprising one of the plastically-deformable sections, the first tubular section having a first fully-self-expanded diameter and the second tubular section having a fully-forcibly expanded diameter greater than the first fully-self-expanded diameter, the method further comprising:

in step (a) introducing the device into the body lumen with the device radially constrained in the first configuration in which each tubular section has the first diameter;

in step (b) allowing the device to self-expand into the second configuration in which the first tubular section has the second diameter; and

in step (c) forcibly expanding the device into the third configuration in which the second tubular section has a diameter greater than the second diameter of the first tubular section.

43. The method of claim 42, wherein the device is deployed in a lumen comprising a tapered portion, the method further comprising:

in step (b) allowing the device to expand in a location wherein the second tubular section is aligned with the tapered portion of the lumen; and

in step (c) forcibly expanding said second tubular section to conform to said tapered portion of the lumen such that the second tubular section comprises a variable diameter expanding from essentially the second diameter of the first tubular section at a first end to larger diameter at a second end.

44. The method of claim 42, wherein the device has a middle section and two opposite end sections, the first tubular section comprises the middle section, the end

sections each comprise second tubular sections, the device is introduced into the body on a balloon catheter, and in step (b) the second configuration comprises a configuration wherein the second tubular sections remain in contact with the balloon catheter.

45. The method of claim 42, wherein the device has a middle section and two opposite end sections, the first tubular section comprises the middle section, the end sections each comprise second tubular sections, and the third configuration into which the second tubular section is forcibly expanded in step (c) comprises a configuration wherein one or both end sections are tapered.

46. The method of claim 39 wherein the device comprises a first, tubular section comprising one of the superelastic sections, a second tubular section comprising one of the plastically-deformable sections, and a third tubular section comprising one of said superelastic sections, the second tubular section disposed longitudinally between the first tubular section and the third tubular section, the first tubular section having a first fully-self-expanded diameter, the third tubular section having a second fully-self-expanded diameter greater than or equal to the first fully-self-expanded diameter, and the second tubular section having a fully-forcibly expanded diameter at least as great as the second fully-self-expanded diameter, the method further comprising:

in step (a) introducing the device into the body lumen with the device radially constrained in the first configuration in which each tubular section has a first diameter;

in step (b) allowing the device to self-expand into the second configuration in which the first and third tubular sections each have respective second diameters greater than the respective first diameters and less than or equal to the respective fully-self-expanded diameters; and

in step (c) forcibly expanding the device into the third configuration in which the second tubular section has a diameter greater than said second diameter of the first tubular section.

47. The method of claim 46 wherein said third tubular section has a greater fully-self-expanded diameter than said first tubular section, and wherein the device is deployed in a lumen comprising a smaller diameter portion, a larger diameter portion greater

than said smaller diameter portion, and a tapered portion between said smaller diameter portion and said larger diameter portion, the method further comprising:

in step (b) allowing the device to expand in a location wherein the first tubular section is aligned with the smaller diameter portion of the lumen, the second tubular section is aligned with the tapered portion of the lumen, and the third tubular section is aligned with the larger diameter portion of the lumen; and

in step (c) forcibly expanding said second tubular section to conform to said tapered portion of the lumen such that the second tubular section comprises a variable diameter ranging from essentially the second diameter of the first tubular section at a first end to essentially the second diameter of the third tubular section at a second end.